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I.—Notes on the Fauna of Chitral.—By Capt. A. H. McMahon, C.S.I., C.I.E., F.Z.S., Political Agent, Dir, Swat, and Chitral.

[ Received 8th February; Read 6th March, 1901.]

As in the case of "Notes on the Fauna of the Gilgit District" (Journal, Asiatic Society of Bengal, vol. lxviii, part 2, no. 2, pp. 105-109, 1899), I propose to place on record the results of such observations as I have been able to make in the matter of Zoology during my official connection during 1899-1900-1901 with the Chitral country.

I know of no previous records having been made of the Fauna of this country. Any record of the existence or non-existence of animals in it will therefore be of use in adding to general knowledge regarding the geographical distribution of the various forms of animal life.

As will be seen, my notes are lamentably scanty. They are based on personal observations made during three visits to Chitral, and on the information kindly given to me by Capt. B. E. M. Gurdon, C.I.E., D.S.O., Assistant Political Agent in Chitral, Major G. A. J. Leslie, R.E., and other military officers stationed in Chitral.

Such as they are, I place these notes on record in the hope that they may be of interest, and form the modest beginning of a more complete and comprehensive record.

The country of Chitral is similar in most respects to the adjacent Hindu Kush region of Gilgit. Geographically it may be defined as the

drainage area of the Chitral river and its numerous affluents as far south as the junction of the Arnawai river with the main stream.

Like Gilgit, it forms one of the most lofty tracts of country on the surface of our globe. From the high glacier-bound valleys which take their rise from Tirich Mir, 25,500 ft. and other lofty mountain peaks, the elevation of the country decreases until as one descends the valleys, the land of snow and glaciers is exchanged for barren hill sides, of rocky cliffs and debris. Passing through the fringe of forest line, one descends to the fertile alluvial plateaux of prehistoric river-beds through which the present streams now run in deep narrow gorges. The lowest elevation, i.e., of about 4,000 ft., is reached at the point where the Chitral river leaves the Chitral district and thence onwards under the name of the Kunar river flows through Asmar to join the Cabul river.

The northern and eastern portions of Chitral are very similar in character to the Gilgit country, and the conditions of life being the same, the fauna is, as one would expect, much the same in both countries. Further south and west however the rainfall is greater, and the hill sides are consequently more covered with forest and vegetation than those of the Gilgit District.\* This naturally tends to an increase in the number and variety of the fauna, and we find pheasants, monkeys, jungle fowl, and leopard (Felis pardus)† which are not to be found elsewhere in Chitral or Gilgit. I am told that the green parrot (I presume Palæornis torquatus) is to be found at the lower end of the Chitral valley. They doubtless come up from the warmer climes of the Jalalabad and Kunar valley.

The neighbouring country on the west, Kafiristan, is very thickly wooded, and from all accounts appears to be particularly rich in fauna of all kinds. Zoological research in Kafiristan would doubtless give most valuable and interesting results. It is to be regretted that such research is at present out of the question.

I proceed now to note on a few species of the Chitral Fauna.

Mammalia.—The most numerous of the larger mammals in Chitral are Ibex, Markhor and Oorial.

Ibex.—(Capra sibirica). These abound on or above the snow-line throughout the higher and more elevated portions of the Chitral country and in the upper portions of all the valleys which join the Chitral valley above Chitral itself. They are not as far as I know to be found in any valley below Chitral.

<sup>\*</sup> Somewhat similar conditions with corresponding results as to fauna prevail in the Chilas tract on the S.-E. corner of the Gilgit District.

<sup>+</sup> As opposed to the snow leopard (Felis uncia).

They are identical with the ibex of the Gilgit District, but for some reason or other, the average length of the horns is slightly less than of those of the Gilgit ibex. Horns of over 40 inches in length are fewer than in Gilgit, and the largest head obtained is I think not over 45 inches.

The rutting season begins about the 1st of February and continues for upwards of a month, but in the case of the older males only half that time.

The young are born in July at an average elevation of 14,000 feet, generally, it is said, in the same nullahs as rutting took place. The females retire into very difficult and inaccessible ground before giving birth.

Markhor.—(Capra falconeri). These are very numerous in all the lower valleys in Chitral. They are of the Pir Panjal variety (vide fig. 165 of Blanford's Fauna of India. Vol. Mammalia), i.e., with horns handsomely curved, but without the wide exaggerated curve and spread of the variety known as the Astor. [I may note here that the Astor variety is only to be found in the few valleys which join the Indus river on the left bank between Bunji and Chilas. All the markhor elsewhere in the Gilgit District are of the Pir Panjal variety].

A few heads somewhat resembling the Cabul variety (fig. 166 of Blanford's Fauna of India) are also to be found in Chitral.

The northern limits of markhor in Chitral appear to be:—in the Lutkho valley at a point half-way between Drusp and Shogot; in the Chitral main valley and valleys joining it on the left bank, at Mori (about 10 miles above Chitral). The southern limits of the Chitral (i.e., Pir Panjal variety) are said to be:—on the right bank of the Kunar river at Chighar Serai, and on the left bank at Nari (Narsat).

The largest head as yet obtained in the Chitral District measures 56 inches in length of horn. Horns over 50 inches are very rare.

In Chitral the rutting season begins about the first week of December, and in Gilgit in about the second or third week of that month. It continues for about a month, but in the case of the older males only about a fortnight. The young in Chitral are born early in June, almost invariably, it is said, in the same nullahs where the parents were during the rutting season. The males leave these nullahs for cooler climes about May. The females retire into the highest and most difficult ground they can find in the nullah before giving birth.

Oorial.—(Ovis vignei).—These are plentiful in the Chitral valley from Reshan downwards. They are of the Ladak variety, known as shapu (Ovis cycloceros), and differ from the proper oorial of the Punjab, Afghanistan, Sind and Beluchistan (Ovis vignei) in having no white ruff

below the neck but only a white tuft in the black beard on the breast, and in having shorter but more massive horns. The horns seldom exceed 30 inches in length. Any over 32 inches are practically unknown. The horns however reach a circumference of from 10 to 12 inches round the base, whereas the oorial seldom exceeds 10 inches. In naming the Chitral animal oorial (Ovis vignei) as above I have followed the nomenclature of Dr. Blanford (Fauna of India) who includes both the shapu (Ovis cycloceros) and oorial (Ovis vignei) under that head. Their northern limits in Chitral are practically the same as those of the markhor.

Their rutting season begins about the 15th of November and continues about a month. The young are born at an average elevation of 9,000 feet.

Of large mammals the following are also common in Chitral.

Leopard.—(Felis pardus). This, the common Indian leopard, is numerous in the lower portions of the Chitral district. It is not to be found in Gilgit.

Snow Leopard.—(Filis uncia). Common in all the higher portions of the country.

Bears.—Unlike Gilgit, where the black bear (Ursus torquatus) is very rare, in Chitral it is very common, and abounds in the Chitral main valley and side valleys as far north as Reshan.

Brown bears (*Ursus arctus*) only occur in the Chitral country at the head of the Turikho and Yarkhun valleys. Its scarcity in Chitral is a contrast to its abundance in most parts of the Gilgit district.

Marmots.—The red or long-tailed Marmot (Arctomys caudatus) with its shrill whistle-like call, is to be found in large numbers at the head of the Ayun nullah, and at the head of the Yarkhun and Baroghil valleys. It does not appear to have been seen elsewhere.

[With reference to Marmots I might note here that since suggesting in my notes on the Fauna of Gilgit, that the Thibet, Himalayan, and Long-tailed Marmots (Arctomys himalayanus—hodgsoni, and caudatus), might prove to be all one and the same species, I have been informed by Dr. Blauford that the A. himalayanus and A. caudatus are distinctly different forms as shown by the structure of their skulls.]

Musk deer.—(Moschus moschiferus) is to be found in the Shishi Koh valley, and is said to be fairly common on the mountains dividing Chitral from Dir.

Monkeys are to be found in the lower end of the Chitral valley. They go about in herds.\* I cannot say what species they belong to.

\* Capt. Gurdon saw a herd of them at Mirkandi on the bank of the Chitral river only 4,000 ft, above sea-level.

The general characteristics seem to be those of Macacus rhesus, but all the specimens I have seen have, instead of a tapering tail, a tail of about 8 inches in length coming to an abrupt end as if it had been cut off like a fox terrier's. I am endeavouring to obtain a specimen to send down to the Indian Museum, Calcutta, for identification.

The existence of monkeys in Chitral, and also as will be noted elsewhere in Dir and Swat, is remarkable, as I do not know of their ever having been reported so far west.

Wolves, jackals, hyænas, lynxes, pig and foxes are to be found in Chitral as in Gilgit. As regards smaller mammals, I have been unable to make personal observations.

Reptilia and Batrachia.—As regards these I regret having been unable to make observations. As in Gilgit, these families are but sparsely represented. Snakes are few, and the only specimen I have been myself able to obtain was one of Zamenis ventrimaculatus.

Birds.—Owing to its larger extent of wooded tracts, birds, especially of the smaller kinds, appear even more plentiful in the winter months in Chitral than in Gilgit. I have been unable to study them, and will content myself with a brief note of such kinds as have come to my notice.

Tetraogallus himalayensis.—The Himalayan snow-cock known as the Ram Chickor is very plentiful on the higher slopes of all the Chitral valleys, as is the case also in Gilgit.

Chickor.—Caccabis chucar is also very common in the lower valleys. Hawking these birds with various kinds of hawks is the principal form of sport indulged in by Chitralis.

Note.—I have never heard of either the grey or black partridge, Francolinus pondicerianus or vulgaris, being found anywhere in Chitral.

Pheasants.—The Rohtas pheasant exists in the nullahs below Drosh, but I am unable to say whether it is the ordinary Pucrasia macrolopha or the species named Pucrasia castanea which "is only known" (vide Blanford's Fauna of India Birds, vol. iv.) "by two skins said to have "come from Kafiristan. In these the neck all round, upper back, breast, "and flanks are chestnut, and the middle of the abdomen black." I am endeavouring to obtain specimens, in order to elucidate this point. The Monal pheasant, Lophophorus refulgens, is plentiful in the wooded valleys of lower Chitral.

No Kalij pheasants have as yet been met with in Chitral.

Jungle Fowl.—Capt. Gurdon informs me that he has often heard what he thinks must be jungle-fowl in the lower Chitral valleys. He says they crow just like a domestic cock. Unfortunately he has never obtained any specimens.

Mynas (the common Acridotheres tristis?) are very plentiful in lower Chitral. Engles, Hawks and Vultures of various kinds are, as might be expected in such a mountainous country, very common in the winter months.

Chitral is famed for its Goshawks (Astur palumbarius) which are caught in large numbers every winter, or more correctly speaking at the commencement of each winter, as they pass over the country on their way to India. As many as 60 birds were caught in the winter of 1899. The method adopted is as follows; an open space of level ground, as high up a mountain side as possible, is selected. In the middle of this a hole large enough for a man to sit in is made, and then roofed over flush with the ground leaving a small concealed entrance at the side for entrance and exit. In the centre of the roof is a small hole through which a tame chickor is put out to walk about on the roof, attached by its leg to a string held by the man inside the chamber. The passing goshawk attracted by the chickor swoops down and seizes it, whereupon it is caught by the legs and pulled down by the man into the chamber below. These goshawks in travelling over Chitral fly very high, and in fine clear weather fly too high to be attracted by this method. It is in threatening, cloudy weather when they fly lower that captures are made. The females are by far the most valued, and all those caught are, by time-honoured custom, the property of the Mehtar to whom they have to be presented. They are sometimes returned to the captor, but more frequently a suitable present is given in return. The Chitralis are famed for their skill in training hawks. A passage goshawk has been known to be flown with success at game within 5 days of its capture. A female goshawk flown at game, after a male bird has been released, will make straight for the male and kill it.

Pisces.—The fishes of Chitral have never been studied. The rivers contain fish in considerable numbers, though none reach any great size. A fish of 5 lbs. is said to have been caught in the lower Chitral river, but few reach 3 lbs. The majority appear to be of the kind known commonly as "Snow Trout," and is I presume a species of Cyprininæ. A species of catfish (Siluroid) is also to be found in the lower waters of the Chitral River.

The Mahaseer, Barbus tor, is unknown in Chitral.

Lepidoptera.—The butterflies of Chitral include many rare and interesting kinds. Major G. A. Leslie, R.E., and Lt. W. H. Evans, R.E., are now engaged in making a collection which is likely to prove of great value.

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I have recorded these notes with some diffidence. The zoological records of a country if they are to exist at all must have a beginning, even though that beginning be a modest one. Chitral offers an interesting field for zoological research, and it will be seen from the above notes how little has as yet been done in this direction.

The existence of monkeys, marmots, musk deer, shapu, Himalayan snow cock, and (I think we may add) jungle-fowl in Chitral is interesting, as no record appears to have been as yet made of these animals so far West.

II.—Notes on the Fauna of Dir and Swat.—By Captain A. H. McMahon, C.S.I, C.I.E, F.Z.S. Political Agent, Dir, Swat and Chitral.

[Received 8th February; Read 6th March, 1901.]

On previous occasions I have, in the case of the Gilgit and Chitral Districts, placed on record a few notes on the Fauna of those countries, in the hope that though scanty in themselves they might be of interest in adding to our existing knowledge of the distribution of various forms of animal life.

I propose here to do the same with regard to the country of Dir and Swat, and to record such few observations on the Zoology of these countries as circumstances have allowed me to make during my stay (1899, 1900, 1901), in the Dir, Swat, and Chitral agency. Nothing as far as I know has ever been recorded in the matter of Zoology regarding these countries before. My notes therefore must be taken as a modest endeavour to make a commencement of the complete Zoological records which it is to be hoped will be made of these countries hereafter by more capable hands.

Inability to move freely about this unsettled country and press of work have prevented my observations being of anything like an extensive nature. The greater portion of the country is as yet unvisited by Europeans, and a wide field of interesting zoological research remains untouched.

The countries of Dir and Swat are treated here as one. They represent the drainage areas of the Panjkora and Swat rivers respectively as far as their junction. Both rivers take their rise within a short distance of each other in the lofty mountain range which forms the southern boundary of Chitral. The peaks of this range vary in height, decreasing from some 23,000 ft. on the N.-E. end to 15,000 ft. or so on the S.-W. end of the range.